

**INFORMATION DISCLOSURE STATEMENT**

Applicant	:	Francis X. Canning
App. No	:	10/619,796
Filed	:	July 15, 2003
For	:	SPARSE AND EFFICIENT BLOCK FACTORIZATION FOR INTERACTION DATA
Examiner	:	Herng Der Day
Art Unit	:	2128

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Dear Sir:


Enclosed for filing in the above-identified application is a PTO/SB/08 Equivalent listing twenty-seven (27) references to be considered by the Examiner. Also enclosed are twenty-seven (27) foreign patent references and/or non-patent literature as listed on the Information Disclosure Statement.

This Information Disclosure Statement is being filed after the mailing date of a final action or after the mailing date of a Notice of Allowance. This Statement is accompanied by the fee set forth in 37 C.F.R. § 1.17(p). The Commissioner is hereby authorized to charge any additional fees which may be required or to credit any overpayment to Account No. 11-1410.

Respectfully submitted,

KNOBBE, MARTENS, OLSON & BEAR, LLP

Dated: May 29, 2007

By:   
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Registration No. 41,830  
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<b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b>  <i>(Multiple sheets used when necessary)</i>	Application No.	10/619,796
	Filing Date	July 15, 2003
	First Named Inventor	Francis X. Canning
	Art Unit	2128
	Examiner	Herng Der Day
SHEET 1 OF 2	Attorney Docket No.	CANNING.001CP2

NON PATENT LITERATURE DOCUMENTS			
Examiner Initials	Cite No.	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T <sup>1</sup>
	1	BAHARAV, ZACHI, "Impedance Matrix Compression (IMC) Using Iteratively Selected Wavelet Basis," IEEE Transactions on Antennas and Propagation, Volume 46, Number 2, February 2, 1998, pages 226-233.	
	2	BANK, RANDOLPH E., "Marching Algorithms and Block Gaussian Elimination," Sparse Matrix Computations, 1976, pages 293-307	
	3	BUNCH, JAMES R., "Partitioning, Tearing and Modification of Sparse Linear Systems," Journal of Mathematical Analysis and Applications 48, 1974, pages 574-593.	
	4	BUNCH, JAMES R., "Block Methods for Solving Sparse Linear Systems," Sparse Matrix Computations, 1976, pages 39-58.	
	5	CANNING, FRANCIS X., "A Sparse Approximate Inverse to the IML Matrices Allows Solution in Five Iterations," 1992, IEEE, pages 176-179	
	6	CANNING, FRANCIS X., "Impedance Matrix Localization Produces a Sparse Moment Method Matrix," IEEE Antennas and Propagation Society International Symposium, 1990. AP-S. 'Merging Technologies for the 90's.' Digest, May 1990, pages 60-63	
	7	CHEW ET AL., "Fast Solution Methods in Electromagnetics," March 1997, IEEE Transactions on Antennas and Propagation, Volume 45, Number 3, pages 533-543	
	8	COIFMAN ET AL., "Faster Single-Stage Multipole Method for the Wave Equation," Conference Proceedings; 10 <sup>th</sup> Annual Review of Progress in Applied Computational Electromagnetics; at the Doubletree Hotel & Convention Center, Monterey, CA, Volume 1, March 21-26, 1994, pages 19-24.	
	9	CONROY ET AL., "Data-Parallel Sparse LU Factorization," Siam J. Sci. Comput., Volume 19, Number 2, March 1998, pages 584-604.	
	10	FOURIE ET AL., "A Fast Sparse Iterative Method (SIM) for Method of Moment," 1994; IEEE, pages 1146-1149	
	11	GEORGE, ALAN, "On Block Elimination for Sparse Linear Systems," Siam J. Numer Anal, Volume 11, Number 3, June 1974, pages 585-603.	
	12	HACKBUSCH, LEIPZIG W., "A Sparse Matrix Arithmetic Based on H-Matrices. Part I: Introduction to H-Matrices," Computing 62, pages 89-108, 1999	
	13	HIGHAM, NICHOLAS J., "Block LU Factorization," Accuracy and Stability of Numerical Algorithms, Siam, 1996, pages 245-259.	
	14	Massachusetts Institute of Technology, "The Method of Moments in Electromagnetics 6.635 lecture notes", 6 pages	
	15	Mobile/Cellular Technology website, <a href="http://www.mobilecomms-technology.com/contractors/antennas/poynting/press2.html">http://www.mobilecomms-technology.com/contractors/antennas/poynting/press2.html</a> , October 2003, 2 pages	
	16	NITCH ET AL., "A Redesign of NEC2 Using Object-Oriented Paradigm," 1994, IEEE	
	17	NITCH ET AL., "Investigating Three Methods for Improving the Performance of the SIM Algorithm," 1994; IEEE, pages 1166-1168	

Examiner Signature	Date Considered
<b>*Examiner:</b> Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.	

T<sup>1</sup> - Place a check mark in this area when an English language Translation is attached.

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### NON PATENT LITERATURE DOCUMENTS

Examiner Initials	Cite No.	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T <sup>1</sup>
	18	SAAD ET AL., "Bilutn: A Domain-Based Multilevel Block Ilut Preconditioner for General Sparse Matrices," Siam J. Matrix Anal. Appl., Volume 21, Number 1, 1999, pages 279-299.	
	19	"SuperNEC: Getting Started," Version 1.53, Poynting Software (Pty) Ltd., September 3, 2001, in 28 pages	
	20	"SuperNEC: GUI Input User Reference Manual," Version 1.5, Poynting Software (Pty) Ltd., May 11, 2001, in 108 pages	
	21	"SuperNEC: GUI Output User Reference Manual," Version 2.0, Poynting Software (Pty) Ltd., December 3, 2001, in 52 pages	
	22	"SuperNEC: GUI User Reference Manual," Version 1.00, Poynting Software (Pty) Ltd., July 12, 2000, in 44 pages	
	23	"SuperNEC: MOM Technical Reference Manual," Version 1.00, Poynting Software (Pty) Ltd., July 14, 2000, in 64 pages	
	24	"SuperNEC: MOM-UTD Hybrid User Reference Manual," Version 1.00, Poynting Software (Pty) Ltd., July 14, 2000, in 70 pages	
	25	"SuperNEC: Parallel MoM User Reference Manual," Version 1.00, Poynting Software (Pty) Ltd., September 21, 1999, in 14 pages	
	25	SuperNEC: Parallel MoM User Reference Manual," Version 2.0, Poynting Software (Pty) Ltd., September 3, 2001, in 14 pages	
	27	YALAMOV ET AL., "On the Stability of a Partitioning Algorithm for Tridiagonal Systems," Siam J. Matrix Anal. Appl., Volume 20, Number 1, 1998, pages 159-181.	

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